

# **Ex. 5 Deliberative Process (DP)**

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**From:** D'Almeida, Carolyn <[dAlmeida.Carolyn@epa.gov](mailto:dAlmeida.Carolyn@epa.gov)>

**Sent:** Thursday, December 05, 2019 2:02 PM

**To:** Wayne Miller <[miller.wayne@azdeq.gov](mailto:miller.wayne@azdeq.gov)>; Allison Bailey <[ABailey@aerostar.net](mailto:ABailey@aerostar.net)>

**Cc:** JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW <[catherine.jerrard@us.af.mil](mailto:catherine.jerrard@us.af.mil)>; [steve@uxopro.com](mailto:steve@uxopro.com); William Hughes <[William.Hughes@cn-bus.com](mailto:William.Hughes@cn-bus.com)>; Smallbeck, Donald R. <[donald.smallbeck@woodplc.com](mailto:donald.smallbeck@woodplc.com)>; Pearson, Stuart C. <[stuart.pearson@woodplc.com](mailto:stuart.pearson@woodplc.com)>; Davis, Eva <[Davis.Eva@epa.gov](mailto:Davis.Eva@epa.gov)>; Brasaemle, Karla <[Karla.Brasaemle@techlawinc.com](mailto:Karla.Brasaemle@techlawinc.com)>

**Subject:** RE: 2019-12-5 - wafb - Is ST012 Well purpose to remove FVM5 data gap - PFOS-PFOA testing

Wayne

The point of my concern with the original sample locations were that they were collected within the SEE treatment area. With so much water extracted, any PFAS source would likely have been removed and may not reflect true current conditions. So EPA requested down gradient sampling because PFAS tends to migrate and higher concentrations could be present outside of SEE source zone removal area.

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*"We can evade reality, but we cannot evade the consequences of evading reality." - Ayn Rand*

**From:** Wayne Miller [<mailto:miller.wayne@azdeq.gov>]

**Sent:** Thursday, December 5, 2019 11:50 AM

**To:** Allison Bailey <ABailey@aerostar.net>

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**Subject:** 2019-12-5 - wafb - Is ST012 Well purpose to remove FVM5 data gap - PFOS-PFOA testing

Is ST012 well selection purpose to remove FVM5 data gap?

Back in June 2018 (about 6-28-2018) Field Variance Memorandum #5 indicated an ST012 AFFF Area 14- and Area 15-targeted Lower Saturated Zone water sample could not be acquired due to elevated water temperature. I believe this non-sampling began the discussion of PFOA PFOS obscured by ST012.

**Wayne Miller**

Project Manager,

Federal Projects Unit,

Remedial Projects Section,

Waste Programs Division  
Ph: 602-771-4121



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On Thu, Dec 5, 2019 at 12:38 PM Allison Bailey <ABailey@aerostar.net> wrote:

Carolyn,

We reviewed the data and case narratives for the samples collected at ST012 (ST012-CZ05, ST012-CZ20, and ST012-LSZ15, Effluent and Influent). None of the samples were diluted for analysis and no issues were reported with the samples or instruments.

Allison

C. Allison Bailey, P.G.

Senior Project Manager



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**From:** D'Almeida, Carolyn <[dAlmeida.Carolyn@epa.gov](mailto:dAlmeida.Carolyn@epa.gov)>

**Sent:** Thursday, December 5, 2019 2:13 PM

**To:** Allison Bailey <[ABailey@aerostar.net](mailto:ABailey@aerostar.net)>; JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW <[catherine.jerrard@us.af.mil](mailto:catherine.jerrard@us.af.mil)>; Wayne Miller <[Miller.Wayne@azdeq.gov](mailto:Miller.Wayne@azdeq.gov)>; [steve@uxopro.com](mailto:steve@uxopro.com)

**Cc:** William Hughes <[William.Hughes@cn-bus.com](mailto:William.Hughes@cn-bus.com)>; Smallbeck, Donald R. <[donald.smallbeck@woodplc.com](mailto:donald.smallbeck@woodplc.com)>; Pearson, Stuart C. <[stuart.pearson@woodplc.com](mailto:stuart.pearson@woodplc.com)>; Davis, Eva <[Davis.Eva@epa.gov](mailto:Davis.Eva@epa.gov)>; Brasaemle, Karla <[Karla.Brasaemle@TechLawInc.com](mailto:Karla.Brasaemle@TechLawInc.com)>

**Subject:** RE: ST012 Wells to be considered for PFOS-PFOA testing

Sorry for the multiple posts. What about sampling wells with only dissolved phase benzene?

Carolyn d'Almeida

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**From:** D'Almeida, Carolyn  
**Sent:** Thursday, December 5, 2019 10:56 AM  
**To:** Allison Bailey <ABailey@aerostar.net>; JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW <catherine.jerrard@us.af.mil>; Wayne Miller <Miller.Wayne@azdeq.gov>; [steve@uxopro.com](mailto:steve@uxopro.com)  
**Cc:** William Hughes <William.Hughes@cn-bus.com>; Smallbeck, Donald R. <donald.smallbeck@woodplc.com>; Pearson, Stuart C. <stuart.pearson@woodplc.com>; Davis, Eva <Davis.Eva@epa.gov>; Brasaemle, Karla <Karla.Brasaemle@TechLawInc.com>  
**Subject:** RE: ST012 Wells to be considered for PFOS-PFOA testing

I see, thanks. Could this have been an issue with the original ST12 PFAS sampling locations?

Carolyn d'Almeida

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**From:** Allison Bailey [<mailto:ABailey@aerostar.net>]  
**Sent:** Thursday, December 5, 2019 10:26 AM  
**To:** D'Almeida, Carolyn <dAlmeida.Carolyn@epa.gov>; JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW <catherine.jerrard@us.af.mil>; Wayne Miller <Miller.Wayne@azdeq.gov>; [steve@uxopro.com](mailto:steve@uxopro.com)  
**Cc:** William Hughes <William.Hughes@cn-bus.com>; Smallbeck, Donald R. <donald.smallbeck@woodplc.com>; Pearson, Stuart C. <stuart.pearson@woodplc.com>; Davis, Eva <Davis.Eva@epa.gov>; Brasaemle, Karla <Karla.Brasaemle@TechLawInc.com>  
**Subject:** RE: ST012 Wells to be considered for PFOS-PFOA testing

Carolyn,

For the sampling in ST012, we want to avoid sampling wells where high concentrations of fuel constituents or potentially free product may be present to prevent the possibility of diluting the sample which would raise the detection limit. As the detection limits are so low for the PFAS constituents, this may affect the data. Also, if free product were to be encountered it may affect the sensitivity of the laboratory PFAS instruments or damage them.

Allison

**C. Allison Bailey, P.G.**

**Senior Project Manager**

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**From:** D'Almeida, Carolyn <[dAlmeida.Carolyn@epa.gov](mailto:dAlmeida.Carolyn@epa.gov)>

**Sent:** Thursday, December 5, 2019 12:59 PM

**To:** Allison Bailey <[ABailey@aerostar.net](mailto:ABailey@aerostar.net)>; JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW <[catherine.jerrard@us.af.mil](mailto:catherine.jerrard@us.af.mil)>; Wayne Miller <[Miller.Wayne@azdeq.gov](mailto:Miller.Wayne@azdeq.gov)>; [steve@uxopro.com](mailto:steve@uxopro.com)

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**Subject:** RE: ST012 Wells to be considered for PFOS-PFOA testing

What is the rationale for avoiding wells with benzene?

Carolyn d'Almeida

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**From:** Allison Bailey [mailto:ABailey@aerostar.net]

**Sent:** Thursday, December 5, 2019 9:39 AM

**To:** D'Almeida, Carolyn <dAlmeida.Carolyn@epa.gov>; JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW <catherine.jerrard@us.af.mil>; Wayne Miller <Miller.Wayne@azdeg.gov>; [steve@uxopro.com](mailto:steve@uxopro.com)

**Cc:** William Hughes <William.Hughes@cn-bus.com>; Smallbeck, Donald R. <donald.smallbeck@woodplc.com>; Pearson, Stuart C. <stuart.pearson@woodplc.com>; Davis, Eva <Davis.Eva@epa.gov>; Brasaemle, Karla <Karla.Brasaemle@TechLawInc.com>

**Subject:** RE: ST012 Wells to be considered for PFOS-PFOA testing

Carolyn,

The use of HydraSleeves™ is consistent with the original PFAS workplan. All groundwater samples for the PFAS SI Investigation at Williams were collected using passive/no purge sampling technology with HydraSleeves™ whole-volume samplers in accordance with the manufacturer's SOP. The HydraSleeves™ were specifically made by the Manufacturer (GeoInsight) using High-density polyethylene (HDPE) to accommodate PFAS sampling.

Please let know if you have any additional questions.

Thank you,

Allison

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*Senior Project Manager*

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**Sent:** Thursday, December 5, 2019 12:06 PM

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**Subject:** RE: ST012 Wells to be considered for PFOS-PFOA testing

Cathy



We have some concerns about the appropriateness and representativeness of using hydrosleeves for PFAS. Sampling materials themselves may contain PFAS. Is this consistent with the original PFAS workplan?

Carolyn d'Almeida

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**From:** JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW [<mailto:catherine.jerrard@us.af.mil>]

**Sent:** Wednesday, December 4, 2019 11:41 AM

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**Subject:** ST012 Wells to be considered for PFOS-PFOA testing

Carolyn and Wayne-

Don, Allison and I discussed locations for the additional PFOS/PFOA samples Carolyn requested on the downgradient portion of ST012. We need to target wells that are not contaminated with fuel constituents and not hot.

We recommend sampling one well from each zone: C02, ST012-W34, and ST012-U38. Can you please provide concurrence on these locations by this Friday? We need to place the order for the hydrosleeves.

Aerostar may be on site the week of Dec. 16<sup>th</sup> to sample a few of the off base wells if we have all the information needed on the specific wells. The hydrosleeves would be placed in the ST012 wells at the same time.

Thank you very much.

Cathy

//SIGNED//

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